### **ENVIRONMENTAL CHEMISTS**

Date of Report: April 25, 1997 Date Received: April 18, 1997

Project: Metro Self Monitor Grab, PO #60612

Date Samples Extracted: April 21, 1997 Date Extracts Analyzed: April 22, 1997

### RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE FOR CHROMIUM, COPPER, NICKEL, AND ZINC USING METHOD 6010

# Samples Processed Using Method 3005A

Results Reported as mg/L (ppm)

Sample ID	Chromium	Copper	<u>Nickel</u>	Zinc
M60612	0.38	0.27	0.23	<0.05
Method Blank	<0.05	<0.05	< 0.05	<0.05

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Date of Report: April 25, 1997 Date Received: April 18, 1997

Project: Metro Self Monitor Grab, PO #60612

## QUALITY ASSURANCE RESULTS FOR TOTAL METALS BY INDUCTIVELY COUPLED PLASMA (ICP) (METHOD 6010)

Laboratory Code: 77331 (Duplicate)

Analyte:	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Chromium	mg/L (ppm)	0.38	0.37	3	0-20
Copper	mg/L (ppm)	0.27	0.27	0	0-20
Nickel	mg/L (ppm)	0.23	0.23	0 a	0-20
Zinc	mg/L (ppm)	< 0.05	<0.05	nm	0-20

Laboratory Code: 77331 (Matrix Spike)

	Reporting	Spike	Sample	% ]	Recovery	Acceptance	Relative Percent
Analyte:	Units	Level	Result	MS	MSD	Criteria	Difference
Chromium	mg/L (ppm)	5	0.38	94	95	80-120	1
Copper	mg/L (ppm)	5	0.27	91	92	80-120	1
Nickel	mg/L (ppm)	10	0.23	97	95	80-120	2
Zinc	mg/L (ppm)	5	<0.05	98	98	80-120	0

Laboratory Code: Spike Blank

Analyte:	Reporting Units	Spike Level	% F MS	lecovery MSD	Acceptanc Criteria	Relative e Percent Difference
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Chromium	mg/L (ppm)	ð	103	98	80-120	ð
Copper	mg/L (ppm)	5	99	95	80-120	4
Nickel	mg/L (ppm)	10	103	103	80-120	0
Zinc	mg/L (ppm)	5	104	101	80-120	3

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

a - The analyte was detected at a level less than five times the detection limit. The RPD results may not provide reliable information on the variability of the analysis.

FRIEDMAN & BRUYA, INC. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282

FORMS/COC

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#### **ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D. Beth M. Albertson, M.S. Bradley T. Benson Kelley Wilt 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044

April 25, 1997

### INVOICE # 97ACU0425-1 DUPLICATE COPY

Accounts Payable Alaskan Copper Works 628 South Hanford St. Seattle, WA 98134

RE: Project Metro Self Monitor Grab, PO #60612: Results of testing requested by Gerry Thompson, Project Manager for material submitted on April 18, 1997.

1 water sample analyzed for Chromium, Copper, Nickel, and Zinc using Method 6010 @ \$65 per sample \$ 65.00

Amount Due \$ 65.00

FEDERAL TAX ID #(b) (6)

#### **ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D. Beth M. Albertson, M.S. Bradley T. Benson Kelley Wilt

3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044

April 25, 1997

Gerry Thompson, Project Manager Alaskan Copper Works 628 South Hanford St. Seattle, WA 98134

Dear Mr. Thompson:

Included are the results from the testing of material submitted on April 18, 1997 from your Metro Self Monitor Grab, PO #60612 project.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Kurt Johnson

Chemist

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Enclosures ACU0425R.DOC